

and 476 CMA licenses.<sup>27</sup> Seventeen winning bidders claimed small or very small business status and won sixty licenses, and nine winning bidders claimed entrepreneur status and won 154 licenses.<sup>28</sup>

15. Government Transfer Bands. The Commission adopted small business size standards for the unpaired 1390-1392 MHz, 1670-1675 MHz, and the paired 1392-1395 MHz and 1432-1435 MHz bands.<sup>29</sup> Specifically, with respect to these bands, the Commission defined an entity with average annual gross revenues for the three preceding years not exceeding \$40 million as a "small business," and an entity with average annual gross revenues for the three preceding years not exceeding \$15 million as a "very small business."<sup>30</sup> Correspondingly, the Commission adopted a bidding credit of 15 percent for "small businesses" and a bidding credit of 25 percent for "very small businesses."<sup>31</sup> An auction for one license in the 1670-1674 MHz band commenced on April 30, 2003 and closed the same day. One license was awarded. The winning bidder was not a small entity.

16. Advanced Wireless Services. In the *AWS-1 Report and Order*, the Commission adopted rules that affect applicants who wish to provide service in the 1710-1755 MHz and 2110-2155 MHz bands.<sup>32</sup> The *AWS-1 Report and Order* defines a "small business" as an entity with average annual gross revenues for the preceding three years not exceeding \$40 million, and a "very small business" as an entity with average annual gross revenues for the preceding three years not exceeding \$15 million. The *AWS-1 Report and Order* also provides small businesses with a bidding credit of 15 percent and very small businesses with a bidding credit of 25 percent.

17. Broadband Radio Service (formerly Multipoint Distribution Service) and Educational Broadband Service (formerly Instructional Television Fixed Service). Multichannel Multipoint Distribution Service (MMDS) systems, often referred to as "wireless cable," transmit video programming to subscribers using the microwave frequencies of the Multipoint Distribution Service (MDS) and

<sup>27</sup> See "Lower 700 MHz Band Auction Closes," *Public Notice*, 18 FCC Rcd 11873 (WTB 2003).

<sup>28</sup> *Id.*

<sup>29</sup> See Amendments to Parts 1, 2, 27 and 90 of the Commission's Rules to License Services in the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, AND 2385-2390 MHz Government Transfer Bands, 17 FCC Rcd 9980 (2002) (*Government Transfer Bands Service Rules Report and Order*).

<sup>30</sup> See *Service Rules Notice*, 17 FCC Rcd at 2550-51 ¶¶ 144-146. To be consistent with the size standard of "very small business" proposed for the 1427-1432 MHz band for those entities with average gross revenues for the three preceding years not exceeding \$3 million, the *Service Rules Notice* proposed to use the terms "entrepreneur" and "small business" to define entities with average gross revenues for the three preceding years not exceeding \$40 million and \$15 million, respectively. Because the Commission has not adopted a \$3 million size standard for the 1427-1432 MHz band, it instead uses the terms "small business" and "very small business" to define entities with average gross revenues for the three preceding years not exceeding \$40 million and \$15 million, respectively.

<sup>31</sup> See Reallocation of the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Bands, *Notice of Proposed Rulemaking*, 17 FCC Rcd 2500, 2550-51 ¶¶ 144-146 (*Government Transfer Bands Service Rules Notice*). To be consistent with the size standard of "very small business" proposed for the 1427-1432 MHz band for those entities with average gross revenues for the three preceding years not exceeding \$3 million, the *Government Transfer Bands Service Rules Notice* proposed to use the terms "entrepreneur" and "small business" to define entities with average gross revenues for the three preceding years not exceeding \$40 million and \$15 million, respectively. Because the Commission is not adopting small business size standards for the 1427-1432 MHz band, it instead uses the terms "small business" and "very small business" to define entities with average gross revenues for the three preceding years not exceeding \$40 million and \$15 million, respectively.

<sup>32</sup> *Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, WT Docket No. 02-353, *Report and Order*, 18 FCC Rcd 25162 (2003) (*AWS-1 Report and Order*).

Instructional Television Fixed Service (ITFS).<sup>33</sup> In its recently issued *BRS/EBS Report and Order* in WT Docket No. 03-66, the Commission comprehensively reviewed its policies and rules relating to the ITFS and MDS services, and replaced the MDS with the Broadband Radio Service and ITFS with the Educational Broadband Service in a new band plan at 2495-2690 MHz.<sup>34</sup> In connection with the 1996 MDS auction, the Commission defined "small business" as an entity that, together with its affiliates, has average gross annual revenues that are not more than \$40 million for the preceding three calendar years.<sup>35</sup> The SBA has approved of this standard.<sup>36</sup> The MDS auction resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas (BTAs).<sup>37</sup> Of the 67 auction winners, 61 claimed status as a small business. At this time, the Commission estimates that of the 61 small business MDS auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations, there are approximately 392 incumbent MDS licensees that have gross revenues that are not more than \$40 million and are thus considered small entities.<sup>38</sup>

#### ***Additional Wireless Radio Services (WRS)***

18. ***Cellular Licensees.*** The SBA has developed a small business size standard for small businesses in the category "Cellular and Other Wireless Telecommunications."<sup>39</sup> Under that SBA category, a business is small if it has 1,500 or fewer employees.<sup>40</sup> For the census category of "Cellular and Other Wireless Telecommunications," Census Bureau data for 2002 show that there were 1,397 firms in this category that operated for the entire year.<sup>41</sup> Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.<sup>42</sup> Thus, under this category and size standard, the majority of firms can be considered small.

19. ***220 MHz Radio Service – Phase I Licensees.*** The 220 MHz service has both Phase I and

<sup>33</sup> Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act – Competitive Bidding, MM Docket No. 94-131 and PP Docket No. 93-253, *Report and Order*, 10 FCC Rcd 9589, 9593 ¶ 7 (1995) (*MDS Auction R&O*).

<sup>34</sup> See Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands, *Report and Order and Further Notice of Proposed Rulemaking*, 19 FCC Rcd 14165 (2004) (*BRS/EBS Report and Order* and *BRS/EBS Further Notice*, respectively).

<sup>35</sup> 47 C.F.R. § 21.961(b)(1).

<sup>36</sup> See Letter to Margaret Wiener, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Bureau, from Gary Jackson, Assistant Administrator for Size Standards, Small Business Administration, dated Mar. 20, 2003 (noting approval of \$40 million size standard for MDS auction).

<sup>37</sup> Basic Trading Areas (BTAs) were designed by Rand McNally and are the geographic areas by which MDS was auctioned and authorized. See *MDS Auction R&O*, 10 FCC Rcd at 9608 ¶ 34.

<sup>38</sup> 47 U.S.C. § 309(j). Hundreds of stations were licensed to incumbent MDS licensees prior to implementation of Section 309(j) of the Communications Act of 1934, 47 U.S.C. § 309(j). For these pre-auction licenses, the applicable standard is SBA's small business size standard for "other telecommunications" (annual receipts of \$12.5 million or less). See 13 C.F.R. § 121.201, NAICS code 517910.

<sup>39</sup> 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 517212.

<sup>40</sup> *Id.*

<sup>41</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 5, NAICS code 517212 (issued Nov. 2005).

<sup>42</sup> *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "1000 employees or more."

Phase II licenses. Phase I licensing was conducted by lotteries in 1992 and 1993. There are approximately 1,515 such non-nationwide licensees and four nationwide licensees currently authorized to operate in the 220 MHz Band. The Commission has not developed a definition of small entities specifically applicable to such incumbent 220 MHz Phase I licensees. To estimate the number of such licensees that are small businesses, the Commission applies the small business size standard under the SBA rules applicable to "Cellular and Other Wireless Telecommunications" companies. This category provides that a small business is a wireless company employing no more than 1,500 persons.<sup>43</sup> For the census category of "Cellular and Other Wireless Telecommunications," Census Bureau data for 2002 show that there were 1,397 firms in this category that operated for the entire year.<sup>44</sup> Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.<sup>45</sup> Thus, under this category and size standard, the majority of firms can be considered small.

20. 220 MHz Radio Service – Phase II Licensees. The 220 MHz service has both Phase I and Phase II licenses. The Phase II 220 MHz service is subject to spectrum auctions. In the *220 MHz Third Report and Order*, the Commission adopted a small business size standard for defining "small" and "very small" businesses for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.<sup>46</sup> This small business standard indicates that a "small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years.<sup>47</sup> A "very small business" is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that do not exceed \$3 million for the preceding three years.<sup>48</sup> The SBA has approved these small size standards.<sup>49</sup> Auctions of Phase II licenses commenced on September 15, 1998, and closed on October 22, 1998.<sup>50</sup> In the first auction, 908 licenses were auctioned in three different-sized geographic areas: three nationwide licenses, 30 Regional Economic Area Group (EAG) Licenses, and 875 Economic Area (EA) Licenses. Of the 908 licenses auctioned, 693 were sold.<sup>51</sup> Thirty-nine small businesses won 373 licenses in the first 220 MHz auction. A second auction included 225 licenses: 216 EA licenses and 9 EAG licenses. Fourteen companies claiming small business status won 158 licenses.<sup>52</sup> A third auction included four licenses: 2 BEA licenses and 2 EAG licenses in the 220 MHz Service. No small or very small business won any of these licenses.<sup>53</sup>

21. Paging. In the *Paging Second Report and Order*, the Commission adopted a size

<sup>43</sup> 13 C.F.R. § 121.201, NAICS code 517212.

<sup>44</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 5, NAICS code 517212 (issued Nov. 2005).

<sup>45</sup> *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "1000 employees or more."

<sup>46</sup> Amendment of Part 90 of the Commission's Rules to Provide For the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service, *Third Report and Order*, 12 FCC Rcd 10943, 11068-70 ¶¶ 291-295 (1997).

<sup>47</sup> *Id.* at 11068 ¶ 291.

<sup>48</sup> *Id.*

<sup>49</sup> See Letter to Daniel Phythyon, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated January 6, 1998.

<sup>50</sup> See generally "220 MHz Service Auction Closes," *Public Notice*, 14 FCC Rcd 605 (WTB 1998).

<sup>51</sup> See "FCC Announces It is Prepared to Grant 654 Phase II 220 MHz Licenses After Final Payment is Made," *Public Notice*, 14 FCC Rcd 1085 (WTB 1999).

<sup>52</sup> See "Phase II 220 MHz Service Spectrum Auction Closes," *Public Notice*, 14 FCC Rcd 11218 (WTB 1999).

<sup>53</sup> See "Multi-Radio Service Auction Closes," *Public Notice*, 17 FCC Rcd 1446 (WTB 2002).

standard for "small businesses" for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.<sup>54</sup> A small business is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years.<sup>55</sup> The SBA has approved this definition.<sup>56</sup> An auction of Metropolitan Economic Area (MEA) licenses commenced on February 24, 2000, and closed on March 2, 2000. Of the 2,499 licenses auctioned, 985 were sold.<sup>57</sup> Fifty-seven companies claiming small business status won 440 licenses.<sup>58</sup> An auction of MEA and Economic Area (EA) licenses commenced on October 30, 2001, and closed on December 5, 2001. Of the 15,514 licenses auctioned, 5,323 were sold.<sup>59</sup> 132 companies claiming small business status purchased 3,724 licenses. A third auction, consisting of 8,874 licenses in each of 175 EAs and 1,328 licenses in all but three of the 51 MEAs commenced on May 13, 2003, and closed on May 28, 2003. Seventy-seven bidders claiming small or very small business status won 2,093 licenses.<sup>60</sup> Currently, there are approximately 24,000 Private Paging site-specific licenses and 74,000 Common Carrier Paging licenses. According to the Commission's *Trends in Telephone Service*, 375 such carriers reported that they were engaged in the provision of either paging or "messaging service."<sup>61</sup> Of these, the Commission estimates that 370 are small, under the SBA-approved small business size standard.<sup>62</sup> The Commission estimates that the majority of private and common carrier paging providers would qualify as small entities under the SBA definition.

22. *Broadband Personal Communications Service.* The broadband Personal Communications Service (PCS) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission has created a small business size standard for Blocks C and F as an entity that has average gross revenues of less than \$40 million in the three previous calendar years.<sup>63</sup> For Block F, an additional small business size standard for "very small business" was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than \$15 million for the preceding three calendar years.<sup>64</sup> These small business size

<sup>54</sup> Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems, *Second Report and Order*, 12 FCC Rcd 2732, 2811-2812 ¶¶ 178-181 (*Paging Second Report and Order*); see also Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems, *Memorandum Opinion and Order on Reconsideration*, 14 FCC Rcd 10030, 10085-10088 ¶¶ 98-107 (1999).

<sup>55</sup> *Paging Second Report and Order*, 12 FCC Rcd at 2811 ¶ 179.

<sup>56</sup> See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, from Aida Alvarez, Administrator, Small Business Administration, dated December 2, 1998.

<sup>57</sup> See "929 and 931 MHz Paging Auction Closes," *Public Notice*, 15 FCC Rcd 4858 (WTB 2000).

<sup>58</sup> See *id.*

<sup>59</sup> See "Lower and Upper Paging Band Auction Closes," *Public Notice*, 16 FCC Rcd 21821 (WTB 2002).

<sup>60</sup> See "Lower and Upper Paging Bands Auction Closes," *Public Notice*, 18 FCC Rcd 11154 (WTB 2003).

<sup>61</sup> See *Trends in Telephone Service*, Industry Analysis Division, Wireline Competition Bureau, Table 5.3 (Number of Telecommunications Service Providers by Size of Business) (June 2005).

<sup>62</sup> 13 C.F.R. § 121.201, NAICS code 517211.

<sup>63</sup> See Amendment of Parts 20 and 24 of the Commission's Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, *Report and Order*, 11 FCC Rcd 7824, 7850-7852 ¶¶ 57-60 (1996); see also 47 C.F.R. § 24.720(b).

<sup>64</sup> See Amendment of Parts 20 and 24 of the Commission's Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, *Report and Order*, 11 FCC Rcd 7824, 7852 ¶ 60.

standards, in the context of broadband PCS auctions, have been approved by the SBA.<sup>65</sup> No small businesses within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were 90 winning bidders that qualified as small entities in the C Block auctions. A total of 93 "small" and "very small" business bidders won approximately 40 percent of the 1,479 licenses for Blocks D, E, and F.<sup>66</sup> On March 23, 1999, the Commission reaucted 155 C, D, E, and F Block licenses; there were 113 small business winning bidders.<sup>67</sup> On January 26, 2001, the Commission completed the auction of 422 C and F PCS licenses in Auction 35.<sup>68</sup> Of the 35 winning bidders in this auction, 29 qualified as "small" or "very small" businesses. Subsequent events concerning Auction 35, including judicial and agency determinations, resulted in a total of 163 C and F Block licenses being available for grant.

23. Narrowband Personal Communications Service. The Commission held an auction for Narrowband Personal Communications Service (PCS) licenses that commenced on July 25, 1994, and closed on July 29, 1994. A second commenced on October 26, 1994 and closed on November 8, 1994. For purposes of the first two Narrowband PCS auctions, "small businesses" were entities with average gross revenues for the prior three calendar years of \$40 million or less.<sup>69</sup> Through these auctions, the Commission awarded a total of forty-one licenses, 11 of which were obtained by four small businesses.<sup>70</sup> To ensure meaningful participation by small business entities in future auctions, the Commission adopted a two-tiered small business size standard in the *Narrowband PCS Second Report and Order*.<sup>71</sup> A "small business" is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than \$40 million.<sup>72</sup> A "very small business" is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than \$15 million.<sup>73</sup> The SBA has approved these small business size standards.<sup>74</sup> A third auction commenced on October 3, 2001 and closed on October 16, 2001. Here, five bidders won 317 (MTA and nationwide) licenses.<sup>75</sup> Three of these claimed status as a small or very small entity and won

<sup>65</sup> See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated December 2, 1998.

<sup>66</sup> FCC News, "Broadband PCS, D, E and F Block Auction Closes," No. 71744 (rel. January 14, 1997).

<sup>67</sup> See "C, D, E, and F Block Broadband PCS Auction Closes," *Public Notice*, 14 FCC Rcd 6688 (WTB 1999).

<sup>68</sup> See "C and F Block Broadband PCS Auction Closes; Winning Bidders Announced," *Public Notice*, 16 FCC Rcd 2339 (2001).

<sup>69</sup> Implementation of Section 309(j) of the Communications Act – Competitive Bidding Narrowband PCS, *Third Memorandum Opinion and Order and Further Notice of Proposed Rulemaking*, 10 FCC Rcd 175, 196 ¶ 46 (1994).

<sup>70</sup> See "Announcing the High Bidders in the Auction of ten Nationwide Narrowband PCS Licenses, Winning Bids Total \$617,006,674," *Public Notice*, PNWL 94-004 (rel. Aug. 2, 1994); "Announcing the High Bidders in the Auction of 30 Regional Narrowband PCS Licenses; Winning Bids Total \$490,901,787," *Public Notice*, PNWL 94-27 (rel. Nov. 9, 1994).

<sup>71</sup> Amendment of the Commission's Rules to Establish New Personal Communications Services, Narrowband PCS, *Second Report and Order and Second Further Notice of Proposed Rule Making*, 15 FCC Rcd 10456, 10476 ¶ 40 (2000).

<sup>72</sup> *Id.*

<sup>73</sup> *Id.*

<sup>74</sup> See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated December 2, 1998.

<sup>75</sup> See "Narrowband PCS Auction Closes," *Public Notice*, 16 FCC Rcd 18663 (WTB 2001).

311 licenses.

24. Specialized Mobile Radio. The Commission awards "small entity" bidding credits in auctions for Specialized Mobile Radio (SMR) geographic area licenses in the 800 MHz and 900 MHz bands to firms that had revenues of no more than \$15 million in each of the three previous calendar years.<sup>76</sup> The Commission awards "very small entity" bidding credits to firms that had revenues of no more than \$3 million in each of the three previous calendar years.<sup>77</sup> The SBA has approved these small business size standards for the 900 MHz Service.<sup>78</sup> The Commission has held auctions for geographic area licenses in the 800 MHz and 900 MHz bands. The 900 MHz SMR auction began on December 5, 1995, and closed on April 15, 1996. Sixty bidders claiming that they qualified as small businesses under the \$15 million size standard won 263 geographic area licenses in the 900 MHz SMR band. The 800 MHz SMR auction for the upper 200 channels began on October 28, 1997, and was completed on December 8, 1997. Ten bidders claiming that they qualified as small businesses under the \$15 million size standard won 38 geographic area licenses for the upper 200 channels in the 800 MHz SMR band.<sup>79</sup> A second auction for the 800 MHz band was held on January 10, 2002 and closed on January 17, 2002 and included 23 BEA licenses. One bidder claiming small business status won five licenses.<sup>80</sup>

25. The auction of the 1,050 800 MHz SMR geographic area licenses for the General Category channels began on August 16, 2000, and was completed on September 1, 2000. Eleven bidders won 108 geographic area licenses for the General Category channels in the 800 MHz SMR band qualified as small businesses under the \$15 million size standard. In an auction completed on December 5, 2000, a total of 2,800 Economic Area licenses in the lower 80 channels of the 800 MHz SMR service were sold. Of the 22 winning bidders, 19 claimed "small business" status and won 129 licenses. Thus, combining all three auctions, 40 winning bidders for geographic licenses in the 800 MHz SMR band claimed status as small business.

26. In addition, there are numerous incumbent site-by-site SMR licensees and licensees with extended implementation authorizations in the 800 and 900 MHz bands. The Commission does not know how many firms provide 800 MHz or 900 MHz geographic area SMR pursuant to extended implementation authorizations, nor how many of these providers have annual revenues of no more than \$3 million or \$15 million (the special small business size standards), or have no more than 1,500 employees (the generic SBA standard for wireless entities, discussed, *supra*). One firm has over \$15 million in revenues. The Commission assumes, for purposes of this analysis, that all of the remaining existing extended implementation authorizations are held by small entities.

27. Private Land Mobile Radio. Private Land Mobile Radio (PLMR) systems serve an essential role in a range of industrial, business, land transportation, and public safety activities. These radios are used by companies of all sizes operating in all U.S. business categories, and are often used in support of the licensee's primary (non-telecommunications) business operations. The SBA has developed a small business size standard for the economic census category, "Cellular and Other Wireless

<sup>76</sup> 47 C.F.R. § 90.814(b)(1).

<sup>77</sup> *Id.*

<sup>78</sup> See Letter to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated August 10, 1999. The Commission notes that, although a request was also sent to the SBA requesting approval for the small business size standard for 800 MHz, approval is still pending.

<sup>79</sup> See "Correction to Public Notice DA 96-586: FCC Announces Winning Bidders in the Auction of 1020 Licenses to Provide 900 MHz SMR in Major Trading Areas," *Public Notice*, 18 FCC Rcd 18367 (WTB 1996).

<sup>80</sup> See "Multi-Radio Service Auction Closes," *Public Notice*, 17 FCC Rcd 1446 (WTB 2002).

Telecommunications," which is any such entity employing no more than 1,500 persons.<sup>81</sup> The Commission does not require PLMR licensees to disclose information about number of employees, so the Commission does not have information that could be used to determine how many PLMR licensees constitute small entities under this definition.

28. Fixed Microwave Services. Fixed microwave services include common carrier,<sup>82</sup> private-operational fixed,<sup>83</sup> and broadcast auxiliary radio services.<sup>84</sup> Currently, there are approximately 22,015 common carrier fixed licensees and 61,670 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services. The Commission has not yet defined a small business with respect to microwave services. As noted, the SBA has developed a small business size for the broad census category, "Cellular and Other Wireless Telecommunications" companies—that is, an entity with no more than 1,500 persons.<sup>85</sup> The Commission does not have data specifying the number of these licensees that have more than 1,500 employees, and thus is unable at this time to estimate with greater precision the number of fixed microwave service licensees that would qualify as small business concerns under the SBA's small business size standard. Consequently, the Commission estimates that there are 22,015 or fewer small common carrier fixed licensees and 61,670 or fewer small private operational-fixed licensees and small broadcast auxiliary radio licensees in the microwave services that may be affected by the rules and policies adopted herein. The Commission notes, however, that the common carrier microwave fixed licensee category includes some large entities.

29. 39 GHz Service. The Commission defines "small entity" for 39 GHz licenses as an entity that has average gross revenues of less than \$40 million in the three previous calendar years.<sup>86</sup> "Very small business" is defined as an entity that, together with its affiliates, has average gross revenues of not more than \$15 million for the preceding three calendar years.<sup>87</sup> The SBA has approved these definitions.<sup>88</sup> The auction of the 2,173 39 GHz licenses began on April 12, 2000, and closed on May 8, 2000. The 18 bidders who claimed small business status won 849 licenses.

30. Local Multipoint Distribution Service. An auction of the 986 Local Multipoint Distribution Service (LMDS) licenses began on February 18, 1998, and closed on March 25, 1998. The Commission defined "small entity" for LMDS licenses as an entity that has average gross revenues of less

<sup>81</sup> See 13 C.F.R. § 121.201, NAICS code 517212.

<sup>82</sup> 47 C.F.R. §§ 101 *et seq.* (formerly, part 21 of the Commission's Rules).

<sup>83</sup> Persons eligible under parts 80 and 90 of the Commission's rules can use Private Operational-Fixed Microwave services. See generally 47 C.F.R. parts 80 and 90. Stations in this service are called operational-fixed to distinguish them from common carrier and public fixed stations. Only the licensee may use the operational-fixed station, and only for communications related to the licensee's commercial, industrial, or safety operations.

<sup>84</sup> Auxiliary Microwave Service is governed by part 74 of Title 47 of the Commission's Rules. See 47 C.F.R. Part 74. Available to licensees of broadcast stations and to broadcast and cable network entities, broadcast auxiliary microwave stations are used for relaying broadcast television signals from the studio to the transmitter, or between two points such as a main studio and an auxiliary studio. The service also includes mobile TV pickups, which relay signals from a remote location back to the studio.

<sup>85</sup> 13 C.F.R. § 121.201, NAICS code 517212.

<sup>86</sup> See Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Band, *Report and Order*, 12 FCC Rcd 18600 (1997).

<sup>87</sup> *Id.*

<sup>88</sup> See Letter to Margaret Wiener, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Hector Barreto, Administrator, Small Business Administration, dated January 18, 2002.

than \$40 million in the three previous calendar years.<sup>89</sup> An additional classification for "very small business" was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than \$15 million for the preceding three calendar years.<sup>90</sup> These regulations defining "small entity" in the context of LMDS auctions have been approved by the SBA.<sup>91</sup> There were 93 winning bidders that qualified as small entities in the LMDS auctions. A total of 93 small and very small business bidders won approximately 277 A Block licenses and 387 B Block licenses. On March 27, 1999, the Commission re-auctioned 161 licenses; there were 32 small and very small business winning bidders that won 119 licenses.

31. 218-219 MHz Service. The first auction of 218-219 MHz (previously referred to as the Interactive and Video Data Service or IVDS) spectrum resulted in 178 entities winning licenses for 594 Metropolitan Statistical Areas (MSAs).<sup>92</sup> Of the 594 licenses, 567 were won by 167 entities qualifying as a small business. For that auction, the Commission defined a small business as an entity that, together with its affiliates, has no more than a \$6 million net worth and, after federal income taxes (excluding any carry over losses), has no more than \$2 million in annual profits each year for the previous two years.<sup>93</sup> For future auctions in the *218-219 MHz Report and Order and Memorandum Opinion and Order*, the Commission defined a small business as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and their affiliates, has average annual gross revenues not exceeding \$15 million for the preceding three years.<sup>94</sup> A very small business is defined as an entity that, together with its affiliates and persons or entities that holds interests in such an entity and its affiliates, has average annual gross revenues not exceeding \$3 million for the preceding three years.<sup>95</sup> The SBA has approved of these definitions.<sup>96</sup> At this time, no additional auction is scheduled.

32. Location and Monitoring Service. Multilateration Location and Monitoring Service (LMS) systems use non-voice radio techniques to determine the location and status of mobile radio units. For purposes of auctioning LMS licenses, the Commission has defined "small business" as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the preceding three years not exceeding \$15 million.<sup>97</sup> A "very small business" is defined as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the preceding three years

<sup>89</sup> See Rulemaking to Amend Parts 1, 2, 21, 25, of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, Reallocate the 29.5-30.5 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, *Second Report and Order, Order on Reconsideration, and Fifth Notice of Proposed Rule Making*, 12 FCC Rcd 12545, 12689-90 ¶ 348 (1997).

<sup>90</sup> *Id.*

<sup>91</sup> See Letter to Daniel Phythyon, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated January 6, 1998.

<sup>92</sup> See "Interactive Video and Data Service (IVDS) Applications Accepted for Filing," *Public Notice*, 9 FCC Rcd 6227 (1994).

<sup>93</sup> Implementation of Section 309(j) of the Communications Act – Competitive Bidding, *Fourth Report and Order*, 9 FCC Rcd 2330 (1994).

<sup>94</sup> Amendment of Part 95 of the Commission's Rules to Provide Regulatory Flexibility in the 218-219 MHz Service, *Report and Order and Memorandum Opinion and Order*, 15 FCC Rcd 1497 (1999).

<sup>95</sup> *Id.*

<sup>96</sup> See Letter to Daniel Phythyon, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated January 6, 1998.

<sup>97</sup> Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, *Second Report and Order*, 13 FCC Rcd 15182, 15192 ¶ 20 (1998); see also 47 C.F.R. § 90.1103



not exceeding \$3 million.<sup>98</sup> These definitions have been approved by the SBA.<sup>99</sup> An auction for multilateration LMS licenses commenced on February 23, 1999, and closed on March 5, 1999. Of the 528 licenses auctioned, 289 licenses were sold to four small businesses. In addition, there are numerous site-by-site non-multilateration licensees, and the Commission does not know how many of these providers have annual revenues of no more than \$3 million or \$15 million (the special small business size standards), or have no more than 1,500 employees (the generic SBA standard for wireless entities, discussed *supra*). The Commission assumes, for purposes of this analysis, that all of these licenses are held by small entities.

33. Rural Radiotelephone Service. The Commission uses the SBA small business size standard applicable to cellular and other wireless telecommunication companies, *i.e.*, an entity employing no more than 1,500 persons.<sup>100</sup> There are approximately 1,000 licensees in the Rural Radiotelephone Service, and the Commission estimates that there are 1,000 or fewer small entity licensees in the Rural Radiotelephone Service that may be affected by the rules and policies adopted herein.

34. Air-Ground Radiotelephone Service. The Commission uses the SBA small business size standard applicable to cellular and other wireless telecommunication companies, *i.e.*, an entity employing no more than 1,500 persons.<sup>101</sup> There are approximately 100 licensees in the Air-Ground Radiotelephone Service, and the Commission estimates that almost all of them qualify as small entities under the SBA standard.

35. Offshore Radiotelephone Service. This service operates on several ultra high frequency (UHF) TV broadcast channels that are not used for TV broadcasting in the coastal area of the states bordering the Gulf of Mexico. At present, there are approximately 55 licensees in this service. The Commission uses the SBA small business size standard applicable to cellular and other wireless telecommunication companies, *i.e.*, an entity employing no more than 1,500 persons.<sup>102</sup> The Commission is unable at this time to estimate the number of licensees that would qualify as small entities under the SBA standard. The Commission assumes, for purposes of this analysis, that all of the 55 licensees are small entities, as that term is defined under the SBA standard.

36. Multiple Address Systems. Entities using Multiple Address Systems (MAS) spectrum, in general, fall into two categories: (1) those using the spectrum for profit-based uses, and (2) those using the spectrum for private internal uses. With respect to the first category, the Commission defines "small entity" for MAS licenses as an entity that has average gross revenues of less than \$15 million in the three previous calendar years.<sup>103</sup> "Very small business" is defined as an entity that, together with its affiliates, has average gross revenues of not more than \$3 million for the preceding three calendar years.<sup>104</sup> The SBA has approved of these special small business size standards.<sup>105</sup> The majority of these entities will

<sup>98</sup> Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, *Second Report and Order*, 13 FCC Rcd at 15192 ¶ 20; *see also* 47 C.F.R. § 90.1103.

<sup>99</sup> *See* Letter to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated Feb. 22, 1999.

<sup>100</sup> 13 C.F.R. § 121.201, NAICS code 517212.

<sup>101</sup> *Id.*

<sup>102</sup> *Id.*

<sup>103</sup> *See* Amendment of the Commission's Rules Regarding Multiple Address Systems, *Report and Order*, 15 FCC Rcd ¶ 1956, 12008 ¶ 123 (2000).

<sup>104</sup> *Id.*

<sup>105</sup> *See* Letter to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated June 4, 1999.

most likely be licensed in bands where the Commission has implemented a geographic area licensing approach that would require the use of competitive bidding procedures to resolve mutually exclusive applications. The Commission's licensing database indicates that, as of January 20, 1999, there were a total of 8,670 MAS station authorizations. Of these, 260 authorizations were associated with common carrier service. In addition, an auction for 5,104 MAS licenses in 176 EAs began November 14, 2001, and closed on November 27, 2001.<sup>106</sup> Seven winning bidders claimed status as small or very small businesses and won 611 licenses.

37. With respect to the second category, which consists of entities that use, or seek to use, MAS spectrum to accommodate their own internal communications needs, MAS serves an essential role in a range of industrial, safety, business, and land transportation activities. MAS radios are used by companies of all sizes, operating in virtually all U.S. business categories, and by all types of public safety entities. As noted, the SBA has developed a small business size standard for the broad economic census category, "Cellular and Other Wireless Telecommunications," which is any such entity employing no more than 1,500 persons.<sup>107</sup> The Commission's licensing database indicates that, as of January 20, 1999, of the 8,670 total MAS station authorizations, 8,410 authorizations were for private radio service, and of these, 1,433 were for private land mobile radio service.

38. Incumbent 24 GHz Licensees. The rules at issue could affect incumbent licensees who were relocated to the 24 GHz band from the 18 GHz band, and applicants who wish to provide services in the 24 GHz band. As noted, the SBA has developed a small business size standard for the broad economic census category, "Cellular and Other Wireless Telecommunications," which is any such entity employing no more than 1,500 persons.<sup>108</sup> The Commission believes that there are only two licensees in the 24 GHz band that were relocated from the 18 GHz band, Teligent<sup>109</sup> and TRW, Inc. The Commission understands that Teligent and its related companies have less than 1,500 employees, though this may change in the future. TRW is not a small entity. Thus, only one incumbent licensee in the 24 GHz band is a small business entity.

39. Future 24 GHz Licensees. With respect to new applicants in the 24 GHz band, the Commission has defined "small business" as an entity that, together with controlling interests and affiliates, has average annual gross revenues for the three preceding years not exceeding \$15 million.<sup>110</sup> "Very small business" in the 24 GHz band is defined as an entity that, together with controlling interests and affiliates, has average gross revenues not exceeding \$3 million for the preceding three years.<sup>111</sup> The SBA has approved these size standards. At this time, no additional auction is scheduled.

40. Cable and Other Program Distribution. The SBA has developed a small business size standard for Cable and Other Program Distribution, which is: all such firms having \$13.5 million or less in annual receipts.<sup>112</sup> According to Census Bureau data for 2002, there were a total of 1,191 firms in this

<sup>106</sup> See "Multiple Address Systems Spectrum Auction Closes," *Public Notice*, 16 FCC Rcd 21011 (2001).

<sup>107</sup> See 13 C.F.R. § 121.201, NAICS code 517212.

<sup>108</sup> See *id.*

<sup>109</sup> Teligent acquired the Digital Electronic Message Service (DEMS) licenses of FirstMark, the only licensee other than TRW in the 24 GHz band whose license has been modified to require relocation to the 24 GHz band.

<sup>110</sup> Amendments to Parts 1, 2, 87 and 101 of the Commission's Rules To License Fixed Services at 24 GHz, *Report and Order*, 15 FCC Rcd 16934, 16967 ¶ 77 (2000) (24 GHz *Report and Order*); see also 47 C.F.R. § 101.538(a)(2).

<sup>111</sup> 24 GHz *Report and Order*, 15 FCC Rcd at 16967 ¶ 77; see also 47 C.F.R. § 101.538(a)(1).

<sup>112</sup> 13 C.F.R. § 121.201, NAICS code 517510.

category that operated for the entire year.<sup>113</sup> Of this total, 1,087 firms had annual receipts of under \$10 million, and 43 firms had receipts of \$10 million or more but less than \$25 million.<sup>114</sup> Thus, under this size standard, the majority of firms can be considered small.

41. Cable Television Relay Service. This service includes transmitters generally used to relay cable programming within cable television system distribution systems. The Census Bureau has defined a category of Cable and Other Program Distribution as follows: "This industry comprises establishments primarily engaged as third-party distribution systems for broadcast programming. The establishments of this industry deliver visual, aural, or textual programming received from cable networks, local television stations, or radio networks to consumers via cable or direct-to-home satellite systems on a subscription or fee basis. These establishments do not generally originate programming material."<sup>115</sup> The SBA has developed a small business size standard for Cable and Other Program Distribution, which is: all such firms having \$13.5 million or less in annual receipts.<sup>116</sup> According to Census Bureau data for 2002, there were a total of 1,191 firms in this category that operated for the entire year.<sup>117</sup> Of this total, 1,087 firms had annual receipts of under \$10 million, and 43 firms had receipts of \$10 million or more but less than \$25 million.<sup>118</sup> Thus, under this size standard, the majority of firms can be considered small.

42. Cable Companies and Systems. The Commission has also developed its own small business size standards, for the purpose of cable rate regulation. Under the Commission's rules, a "small cable company" is one serving 400,000 or fewer subscribers, nationwide.<sup>119</sup> Industry data indicate that, of 1,076 cable operators nationwide, all but eleven are small under this size standard.<sup>120</sup> In addition, under the Commission's rules, a "small system" is a cable system serving 15,000 or fewer subscribers.<sup>121</sup> Industry data indicate that, of 7,208 systems nationwide, 6,139 systems have under 10,000 subscribers, and an additional 379 systems have 10,000-19,999 subscribers.<sup>122</sup> Thus, under this second size standard, most cable systems are small.

43. Cable System Operators. The Communications Act of 1934, as amended, also contains a size standard for small cable system operators, which is "a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not

<sup>113</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, Table 4, Receipts Size of Firms for the United States: 2002, NAICS code 517510 (issued November 2005).

<sup>114</sup> *Id.* An additional 61 firms had annual receipts of \$25 million or more.

<sup>115</sup> U.S. Census Bureau, 2002 NAICS Definitions, "517510 Cable and Other Program Distribution"; <http://www.census.gov/epcd/naics02/def/DEF517.HTM>.

<sup>116</sup> 13 C.F.R. § 121.201, NAICS code 517510.

<sup>117</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, Table 4, Receipts Size of Firms for the United States: 2002, NAICS code 517510 (issued November 2005).

<sup>118</sup> *Id.* An additional 61 firms had annual receipts of \$25 million or more.

<sup>119</sup> 47 C.F.R. § 76.901(e). The Commission determined that this size standard equates approximately to a size standard of \$100 million or less in annual revenues. *Implementation of Sections of the 1992 Cable Act: Rate Regulation*, Sixth Report and Order and Eleventh Order on Reconsideration, 10 FCC Rcd 7393, 7408 (1995).

<sup>120</sup> These data are derived from: R.R. Bowker, *Broadcasting & Cable Yearbook 2006*, "Top 25 Cable/Satellite Operators," pages A-8 & C-2 (data current as of June 30, 2005); Warren Communications News, *Television & Cable Factbook 2006*, "Ownership of Cable Systems in the United States," pages D-1805 to D-1857.

<sup>121</sup> 47 C.F.R. § 76.901(e).

<sup>122</sup> Warren Communications News, *Television & Cable Factbook 2006*, "U.S. Cable Systems by Subscriber Size," page F-2 (data current as of Oct. 2005). The data do not include 718 systems for which classifying data were not available.

affiliated with any entity or entities whose gross annual revenues in the aggregate exceed \$250,000,000.<sup>123</sup> The Commission has determined that an operator serving fewer than 677,000 subscribers shall be deemed a small operator, if its annual revenues, when combined with the total annual revenues of all its affiliates, do not exceed \$250 million in the aggregate.<sup>124</sup> Industry data indicate that, of 1,076 cable operators nationwide, all but ten are small under this size standard.<sup>125</sup> The Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million,<sup>126</sup> and therefore it is unable to estimate more accurately the number of cable system operators that would qualify as small under this size standard.

44. *Multichannel Video Distribution and Data Service.* Multichannel Video Distribution and Data Service (MVDDS) is a terrestrial fixed microwave service operating in the 12.2-12.7 GHz band. Licenses in this service were auctioned in January 2004, with 10 winning bidders for 192 licenses. Eight of these 10 winning bidders claimed small businesses status for 144 of these licenses.<sup>127</sup>

45. *Amateur Radio Service.* These licensees are believed to be individuals, and therefore are not small entities.

46. *Aviation and Marine Services.* Small businesses in the aviation and marine radio services use a very high frequency (VHF) marine or aircraft radio and, as appropriate, an emergency position-indicating radio beacon (and/or radar) or an emergency locator transmitter. The Commission has not developed a small business size standard specifically applicable to these small businesses. As noted, the SBA has developed a small business size standard for the broad economic census category, "Cellular and Other Wireless Telecommunications," which is any such entity employing no more than 1,500 persons.<sup>128</sup> Most applicants for recreational licenses are individuals. Approximately 581,000 ship station licensees and 131,000 aircraft station licensees operate domestically and are not subject to the radio carriage requirements of any statute or treaty. For purposes of the Commission's evaluations in this analysis, the Commission estimates that there are up to approximately 712,000 licensees that are small businesses (or individuals) under the SBA standard. In addition, between December 3, 1998 and December 14, 1998, the Commission held an auction of 42 VHF Public Coast licenses in the 157.1875-157.4500 MHz (ship transmit) and 161.775-162.0125 MHz (coast transmit) bands. For purposes of the auction, the Commission defined a "small" business as an entity that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed \$15 million dollars. In addition, a "very small" business is one that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed \$3 million dollars.<sup>129</sup> There are approximately 10,672 licensees in the Marine Coast Service, and the Commission estimates that almost all of them qualify as "small" businesses under the above special small business size standards.

<sup>123</sup> 47 U.S.C. § 543(m)(2); see 47 C.F.R. § 76.901(f) and nn. 1-3.

<sup>124</sup> 47 C.F.R. § 76.901(f); see Public Notice, *FCC Announces New Subscriber Count for the Definition of Small Cable Operator*, DA 01-158 (Cable Services Bureau, Jan. 24, 2001).

<sup>125</sup> These data are derived from: R.R. Bowker, *Broadcasting & Cable Yearbook 2006*, "Top 25 Cable/Satellite Operators," pages A-8 & C-2 (data current as of June 30, 2005); Warren Communications News, *Television & Cable Factbook 2006*, "Ownership of Cable Systems in the United States," pages D-1805 to D-1857.

<sup>126</sup> The Commission does receive such information on a case-by-case basis if a cable operator appeals a local franchise authority's finding that the operator does not qualify as a small cable operator pursuant to § 76.901(f) of the Commission's rules. See 47 C.F.R. § 76.909(b).

<sup>127</sup> "Multichannel Video Distribution and Data Service Auction Closes," *Public Notice*, DA 04-215 (Feb. 2, 2004).

<sup>128</sup> 13 C.F.R. § 121.201, NAICS code 517212.

<sup>129</sup> Amendment of the Commission's Rules Concerning Maritime Communications, *Third Report and Order and Memorandum Opinion and Order*, 13 FCC Rcd 19853 (1998).

47. *Personal Radio Services.* Personal radio services provide short-range, low power radio for personal communications, radio signaling, and business communications not provided for in other services. The Personal Radio Services include spectrum licensed under Part 95 of the rules.<sup>130</sup> These services include Citizen Band Radio Service (CB), General Mobile Radio Service (GMRS), Radio Control Radio Service (R/C), Family Radio Service (FRS), Wireless Medical Telemetry Service (WMTS), Medical Implant Communications Service (MICS), Low Power Radio Service (LPRS), and Multi-Use Radio Service (MURS).<sup>131</sup> There are a variety of methods used to license the spectrum in these rule parts, from licensing by rule, to conditioning operation on successful completion of a required test, to site-based licensing, to geographic area licensing. Under the RFA, the Commission is required to make a determination of which small entities are directly affected by the rules being adopted. Since all such entities are wireless, the Commission applies the small business size standard "Cellular and Other Wireless Telecommunications," pursuant to which a small entity is defined as employing 1,500 or fewer persons.<sup>132</sup> Many of the licensees in these services are individuals, and thus are not small entities. In addition, due to the mostly unlicensed and shared nature of the spectrum utilized in many of these services, the Commission lacks direct information upon which to base an estimation of the number of small entities under an SBA definition that might be directly affected by the proposed rules.

48. Despite the paucity, or in some instances, total absence, of information about their status as licensees or regulatees or the number of operators in each such service, users of spectrum in these services are listed here as a matter of Commission discretion in order to fulfill the mandate imposed on the Commission by the RFA to regulate small business entities with an understanding towards preventing the possible differential and adverse impact of the Commission's rules on smaller entities. Further, the listing of such entities, despite their indeterminate status, should provide them with fair and adequate notice of the possible impact of the instant proposals.

49. *Public Safety Radio Licensees.* As a general matter, public safety radio licensees include police, fire, local government, forestry conservation, highway maintenance, and emergency medical services.<sup>133</sup> The SBA rules contain a small business size standard for "Cellular and Other Wireless Telecommunications," which encompass business entities engaged in wireless communications

<sup>130</sup> 47 C.F.R. Part 90.

<sup>131</sup> The Citizens Band Radio Service, General Mobile Radio Service, Radio Control Radio Service, Family Radio Service, Wireless Medical Telemetry Service, Medical Implant Communications Service, Low Power Radio Service, and Multi-Use Radio Service are governed by Subpart D, Subpart A, Subpart C, Subpart B, Subpart H, Subpart I, Subpart G, and Subpart J, respectively, of Part 95 of the Commission's rules. See generally 47 C.F.R. Part 95.

<sup>132</sup> 13 C.F.R. § 121.201, NAICS Code 517212.

<sup>133</sup> See subparts A and B of Part 90 of the Commission's Rules, 47 C.F.R. §§ 90.1-90.22. Police licensees include 26,608 licensees that serve state, county, and municipal enforcement through telephony (voice), telegraphy (code), and teletype and facsimile (printed material). Fire licensees include 22,677 licensees comprised of private volunteer or professional fire companies, as well as units under governmental control. Public Safety Radio Pool licensees also include 40,512 licensees that are state, county, or municipal entities that use radio for official purposes. There are also 7,325 forestry service licensees comprised of licensees from state departments of conservation and private forest organizations that set up communications networks among fire lookout towers and ground crews. The 9,480 state and local governments are highway maintenance licensees that provide emergency and routine communications to aid other public safety services to keep main roads safe for vehicular traffic. Emergency medical licensees (1,460) use these channels for emergency medical service communications related to the delivery of emergency medical treatment. Another 19,478 licensees include medical services, rescue organizations, veterinarians, persons with disabilities, disaster relief organizations, school buses, beach patrols, establishments in isolated areas, communications standby facilities, and emergency repair of public communications facilities.

employing no more than 1,500 persons.<sup>134</sup> According to Census Bureau data for 2002, in this category there was a total of 8,863 firms that operated for the entire year.<sup>135</sup> Of this total, 401 firms had 100 or more employees, and the remainder had fewer than 100 employees.<sup>136</sup> With respect to local governments, in particular, since many governmental entities as well as private businesses comprise the licensees for these services, the Commission includes under public safety services the number of government entities affected.

50. Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing. The Census Bureau defines this category as follows: "This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment."<sup>137</sup> The SBA has developed a small business size standard for Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing, which is: all such firms having 750 or fewer employees.<sup>138</sup> According to Census Bureau data for 2002, there were a total of 1,041 establishments in this category that operated for the entire year.<sup>139</sup> Of this total, 1,010 had employment of under 500, and an additional 13 had employment of 500 to 999.<sup>140</sup> Thus, under this size standard, the majority of firms can be considered small.

**E. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities**

51. The projected reporting, recordkeeping, and other compliance requirements resulting from the Report and Order will apply to all entities in the same manner. The Commission believes that applying the same rules equally to all entities promotes fairness. The Commission does not believe that the costs and/or administrative burdens associated with the rules will unduly burden small entities. The revisions the Commission adopts should benefit small entities by giving them more information, more flexibility, and more options for gaining access to valuable wireless spectrum.

52. Renewal Procedures. In this *Report and Order*, the Commission revises Section 27.14 of the rules to eliminate the filing of competing applications at the time of the renewal of 700 MHz licenses. This rule change will relieve all licensees, including small businesses that hold or will hold licenses in the

<sup>134</sup> See 13 C.F.R. § 121.201 (NAICS code 517212); U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Employment Size of Establishments for the United States: 2002," Table 2, NAICS code 517212.

<sup>135</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Employment Size of Establishments for the United States: 2002," Table 2, NAICS code 517212.

<sup>136</sup> *Id.*

<sup>137</sup> U.S. Census Bureau, 2002 NAICS Definitions, "334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing"; <http://www.census.gov/epcd/naics02/def/NDEF334.HTM#N3342>.

<sup>138</sup> 13 C.F.R. § 121.201, NAICS code 334220.

<sup>139</sup> U.S. Census Bureau, American FactFinder, 2002 Economic Census, Industry Series, Industry Statistics by Employment Size, NAICS code 334220 (released May 26, 2005); <http://factfinder.census.gov>. The number of "establishments" is a less helpful indicator of small business prevalence in this context than would be the number of "firms" or "companies," because the latter take into account the concept of common ownership or control. Any single physical location for an entity is an establishment, even though that location may be owned by a different establishment. Thus, the numbers given may reflect inflated numbers of businesses in this category, including the numbers of small businesses. In this category, the Census breaks-out data for firms or companies only to give the total number of such entities for 2002, which was 929.

<sup>140</sup> *Id.* An additional 18 establishments had employment of 1,000 or more.

700 MHz Band the burden of possibly facing a comparative hearing. The *Report and Order* also clarifies that within the renewal context, all licensees must make a substantial service showing and demonstrate that they have substantially complied with the Commission's rules, policies, and the Communications Act of 1934, as amended.<sup>141</sup> This requirement is distinct from the performance requirements that the Commission seeks comment on in the *Further Notice*.

53. 911/E911. There is no general reporting or recordkeeping requirements for 911/E911 compliance. The 911/E911 obligations established in Section 20.18 of our rules, however, are extended to cover all commercial mobile radio services (CMRS), including services licensed in the 700 MHz Commercial Services Band and the AWS-1 bands, to the same extent as they apply to wireless services currently listed in the scope provision of Section 20.18. The Commission will continue, however, to exclude MSS from Section 20.18 in conformity with the Commission's decision in the *E911 Scope Order*.<sup>142</sup> All other CMRS providers must comply with the 911/E911 requirements to the extent that they offer real-time, two way switched voice service that is interconnected with the public switched network and utilize an in-network-switching facility that enables the provider to reuse frequencies and accomplish seamless hand-offs of subscriber calls.<sup>143</sup> The Commission finds that this extension of 911/E911 requirements, while substantial for small carriers, is justified by the interest in competitive neutrality as well as by the critical public safety benefits of 911/E911. To the extent that special circumstances arise in particular situations where compliance may not be technically or economically feasible, waiver relief is available on a case-by-case basis. In addition, to the extent that carriers pursue a handset-based compliance solution, implementation should be easier than in previous 911/E911 compliance instances involving other services. Given that the 911/E911 requirements in Part 27 will be imposed prior to the commencement of services in the 700 MHz band, all of the subscribers to the new services will have compliant handsets from the commencement of service. Small carriers will therefore not have the complication of replacing phones that lack 911/E911 capability.

54. Public Safety Notification. In this *Report and Order*, the Commission takes steps to address potential intermodulation ("IM") to public safety operations in the 700 MHz Band. Specifically, as the Commission did with respect to 800 MHz ESMR and Cellular licensees,<sup>144</sup> the Commission will require 700 MHz Commercial Services Band licensees, upon request from a 700 MHz public safety entity, to provide to that entity information about the location and parameters of any stations they plan to activate in the public safety entity's area of operation.<sup>145</sup> The Commission will also require, as it did in

<sup>141</sup> See 47 C.F.R. § 27.14 (2006).

<sup>142</sup> The Commission initially excluded MSS from § 20.18 in the *E911 Report and Order*. See Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, *Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 18676, 18718 ¶ 83 (1996) (*E911 Report and Order*). In the *E911 Scope Order*, upon revisiting the issue, the Commission recognized that MSS operators continued to face unique difficulties in implementing 911 and E911 obligations, and therefore declined to apply the obligations of § 20.18 and instead imposed a separate, limited 911 requirement specifically for MSS, including a requirement to establish emergency call centers. See Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket 94-102, IB Docket No. 99-67, *Report and Order and Further Notice of Proposed Rulemaking*, 18 FCC Rcd 25340, 25347-57 ¶¶ 20-39 (2003) (*"E911 Scope Order"*).

<sup>143</sup> 47 C.F.R. § 20.18(a).

<sup>144</sup> See 47 C.F.R. § 90.675.

<sup>145</sup> As per Section 90.675, this would include information about the 700 MHz station's location, effective radiated power, antenna height, and channels available for use. 47 C.F.R. § 90.675. Also, as per Section 90.675, Public Safety licensees will not be afforded the right to accept or reject the activation of a proposed 700 MHz station or to unilaterally require changes to the station's operating parameters. We note as well that 700 MHz licensees may regard their operating parameters as proprietary and if so, we encourage such licensees to use non-disclosure agreement whereby third parties will not be given access to such information. Failing that, the affected parties could (continued....)

Section 90.675, public safety licensees to provide, upon request of a 700 MHz Commercial Services Band licensee, the operating parameters of their radio systems.<sup>146</sup> As indicated in the *800 MHz Report and Order*, these actions can both help prevent potential interference from occurring and help identify possible sources of interference more rapidly, if interference were to occur.<sup>147</sup> It is not anticipated that it will be onerous for small businesses to come into compliance with this requirement, which is triggered only upon a request from a public safety entity. The information to be reported is of a type that the licensee will likely have readily available.

55. Application of Secondary Markets Spectrum Leasing Policies and Rules to the Guard Bands. Although the *Report and Order* replaces the Guard Band Manager spectrum leasing regime with the Secondary Markets spectrum leasing policies and rules, it sustains the requirements that applied to the Guard Band Manager regime with respect to the necessity to file annual reports with the Commission on spectrum use, as well as mandatory coordination with public safety entities for all uses of spectrum including that procured through leasing arrangements. The *Report and Order* also eliminates restrictions that had prevented Guard Band licensees from using their spectrum as system operators, and from leasing any more than 49.9 percent of their spectrum to affiliates.

**F. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered**

56. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include (among others) the following four alternatives: (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.<sup>148</sup>

57. In the *700 MHz Commercial Services Notice*, the Commission invited comment on extending the license terms of 700 MHz Band licenses to an expiration date beyond 2015 in order to afford licensees a sufficient period of time for deployment of new 700 MHz Band services once the DTV transition is complete. In addition, the *Notice* sought comment on whether the power limits in the existing rules for the 700 MHz Band spectrum should be revised. Finally, the Commission sought comment on its tentative conclusion that services provided in the 700 MHz Band, and in other bands

(Continued from previous page)

seek a protective order from the Commission. See Digital Output Protection Technology and Recording Method Certifications, *Order*, 19 FCC Rcd 4735 (2004). See also 47 C.F.R. §§ 0.457, 0.459. We also encourage, but do not require, that such matters be submitted to arbitration, mediation, or other alternative dispute resolution mechanisms.

<sup>146</sup> Public Safety licensees will also be required to provide information about any technical changes they plan to make to their systems.

<sup>147</sup> See *Improving Public Safety Communications in the 800 MHz Band, Consolidating the 800 and 900 MHz Industrial/Land Transportation and Business Pool Channels, Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems, Petition for Rule Making of the Wireless Information Networks Forum Concerning the Unlicensed Personal Communications Service, Petition for Rule Making of UT-Starcom, Inc., Concerning the Unlicensed Personal Communications Service, Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for use by the Mobile Satellite Service*, WT Docket 02-55, ET Docket Nos. 00-258 and 95-18, RM-9498, RM-10024, *Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order*, 19 FCC Rcd 14969, 15038-39 ¶ 125 (2004) ("*800 MHz Report and Order*") ("if the characteristics of a proposed new cell are known in advance, it is possible to analyze the cell's potential for interference and make any necessary revisions to cell parameters before the cell is activated"), 15039 ¶ 127.

<sup>148</sup> 5 U.S.C. § 603(c).



subject to Part 27 of the rules such as AWS-1, should be subject to E911 and hearing aid-compatibility requirements to the same extent that such services would be covered if provided in other bands, and on whether such requirements should be extended to all similar wireless services.

58. Small Geographic Service Areas. A number of small and rural service providers, as well as a several different coalitions of small, regional, and rural carriers proposed a mix of service areas that would include 12 REAGs, 176 EAs, and 734 CMAs, instead of just six EAGs. Several national carriers filed comments in support of leaving the EAG pattern in place. Separate comments were also received seeking a nationwide license and license areas smaller than CMAs.

59. The Commission concluded that providing a mix of CMAs, EAs, and REAGs licenses in the 700 MHz Commercial Services spectrum will be an effective means of providing increased access to spectrum, especially in rural areas, while simultaneously meeting other Commission goals. The Commission agrees with those commenters who observe that a revised mix of smaller license sizes would provide a more balanced set of initial licensing opportunities at this time and make available more licenses to match the needs of different potential users.<sup>149</sup> The most common recommendation made to the Commission by small and rural providers was that additional licenses be made available based on small geographic service areas.<sup>150</sup> Some of these commenters asserted in particular that the use of small geographic license areas provides an incentive for licensees to serve more rural communities, whereas licensing by large geographic license areas may allow licensees to meet their performance requirements only by serving the largest urban markets.<sup>151</sup>

60. Power Limits and Public Safety Notification. In this *Report and Order*, the Commission takes steps to address potential intermodulation ("IM") to public safety operations in the 700 MHz band in a manner that minimizes the impact on commercial licensees in the Upper 700 MHz Band, including small businesses with commercial operations in this band. The Commission declines to impose any technical restrictions on Upper 700 MHz Commercial Services Band licensees to address potential IM interference to 700 MHz public safety operations. The Commission will, however, require Upper 700 MHz Commercial Services Band licensees and 700 MHz public safety entities, upon request from the other, to exchange information about their operating stations and systems. A reporting requirement triggered only by a request of a public safety entity operating on the 700 MHz Band will minimize economic impact on small businesses operating in the commercial 700 MHz Band relative to the alternative of imposing potentially burdensome technical restrictions on Upper 700 MHz Commercial Services Band licensees to address potential IM interference to 700 MHz public safety operations.

61. 911/E911. Almost all of the commenters addressing the 911/E911 issue support application of the 911/E911 requirements to services in the 700 MHz Commercial Services Band to the

<sup>149</sup> See Letter from Multiple Commenters to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 06-150 (filed October 20, 2006) ("Balanced Consensus Plan") (signatories to the Balanced Consensus Plan are Alltel, Aloha, Blooston, C&W, ConnectME Authority, Corr, Dobson, Leap, Maine Office of Chief Information Officer, MetroPCS, NTCA, Nebraska PSC, North Dakota PSC, RCA, RTG, Union, US Cellular, Vermont et al., Vermont Telephone Company); U.S. Cellular Comments in WT Docket 06-150 at 3; Corr Comments in WT Docket 06-150 at 3; NTCA Comments in WT Docket 06-150 at 5-6.

<sup>150</sup> See Aloha Comments in WT Docket 06-150 at 3-6; Balanced Consensus Plan at attachment; Blooston Comments in WT Docket 06-150 at 2; C&W Reply Comments in WT Docket 06-150 at 2-3; Corr Comments in WT Docket 06-150 at 2-4; Dobson Comments in WT Docket 06-150 at 2-4; Howard/Javed Comments in WT Docket 06-150 at 9; Leap Comments in WT Docket 06-150 at 4, 5-6; MilkyWay Comments in WT Docket 06-150 at 1-6; NextWave Comments in WT Docket 06-150 at 2-6; NTCA Comments in WT Docket 06-150 at 6; OPASTCO Comments in WT Docket 06-150 at 2-3; RCA Comments at 4-8; RTG Comments in WT Docket 06-150 at 2; U.S. Cellular Comments in WT Docket 06-150 at 4.

<sup>151</sup> See Corr Comments in WT Docket 06-150 at 4; RCA Comments in WT Docket 06-150 at 9-10.

extent that those services are similar to the services already subject to the requirements.<sup>152</sup> Several commenters also state, however, that E911 should not apply to 700 MHz Commercial Services Band services to a greater extent than it does to services currently subject to the requirements.<sup>153</sup>

62. The Commission concludes that Section 20.18(a) of its rules should be amended to apply 911/E911 requirements to all commercial mobile radio services (CMRS), including services licensed in the 700 MHz Commercial Services Band and the AWS-1 bands, to the same extent as they apply to wireless services currently listed in the scope provision of Section 20.18.<sup>154</sup> For those small carriers who can demonstrate in a particular circumstance that implementation is not technically or economically feasible, the option of waiver relief is available. The *Report and Order* concludes, however, that such case-by-case circumstances, if any, should not delay the implementation of 911/E911 for service providers generally. In this regard, the Commission has observed previously that "911 service is critical to our Nation's ability to respond to a host of crises,"<sup>155</sup> and that E911 in particular "saves lives and property by helping emergency services personnel do their jobs more quickly and efficiently."<sup>156</sup> The Commission also takes note of Congress's finding in the "Ensuring Needed Help Arrives Near Callers Employing 911 Act of 2004" that "for the sake of our Nation's homeland security and public safety, a universal emergency telephone number (911) that is enhanced with the most modern and state-of-the-art telecommunications capabilities possible should be available to all citizens in all regions of the Nation" and that "enhanced 911 is a high national priority."<sup>157</sup>

63. Application of Secondary Markets Spectrum Leasing Policies and Rules to the Guard Bands. The *Report and Order* maintains the existing requirement for Guard Band licensees to file annual reports regarding their spectrum usage, and thus does not increase the existing recordkeeping and reporting burden. Additionally, the *Report and Order* maintains the existing coordination requirements where all uses of Guard Bands spectrum must be coordinated with public safety operations in the 700 MHz Band. Under the *de jure* transfer leasing option within the Secondary Markets spectrum leasing policies and rules, the Guard Band licensee continues to be responsible for coordinating with the public safety operations. Under the *de facto* transfer leasing option, the lessee becomes primarily responsible for such coordination. As a result, to the extent that a Guard Band licensee is a small entity, the availability of the *de facto* transfer leasing option under the *Report and Order* reduces the overall potential burden on the Guard Band licensee, compared to its previous responsibility as a Guard Band Manager to coordinate all uses of its spectrum.

#### G. Report to Congress

64. The Commission will send a copy of the *Report and Order*, including this FRFA, in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional

<sup>152</sup> See Aloha Comments in WT Docket 06-150 at 12; AT&T Comments in WT Docket 06-150 at 16; Blooston Comments in WT Docket 06-150 at 8; Cingular Comments in WT Docket 06-150 at 15; Dobson Comments in WT Docket 06-150 at 11; Leap Comments in WT Docket 06-150 at 11; NENA Comments in WT Docket 06-150 at 1-2; Qualcomm Comments in WT Docket 06-150 at 24 (supporting application of E911 to both auctioned and previously un auctioned spectrum); U.S. Cellular Comments in WT Docket 06-150 at 18 (same); TIA Comments in WT Docket 06-150 at 9-10; T-Mobile Reply at 6.

<sup>153</sup> See Aloha Comments in WT Docket 06-150 at 12 (700 MHz licensees should be subject to the same E911 requirements, "no more or less," as other licensees providing services where E911 obligations exist); Cingular Comments in WT Docket 06-150 at 15 (supporting application where services met the *E911 Scope Order* criteria); Qualcomm Comments at 24.

<sup>154</sup> See 47 C.F.R. § 20.18.

<sup>155</sup> See *E911 Scope Order*, 18 FCC Rcd at 25341 ¶ 1.

<sup>156</sup> *E911 Report and Order*, 11 FCC Rcd at 18678 ¶ 3, 18679 ¶ 5.

<sup>157</sup> 47 U.S.C. § 942, notes (1), (4).

Review Act.<sup>158</sup> In addition, the Commission will send a copy of the *Report and Order*, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the *Report and Order* and FRFA (or summaries thereof) will also be published in the Federal Register.<sup>159</sup>

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<sup>158</sup> See 5 U.S.C. § 801(a)(1)(A).

<sup>159</sup> See 5 U.S.C. § 604(b).

## APPENDIX D

## Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (the "RFA"),<sup>1</sup> the Commission has prepared this Initial Regulatory Flexibility Analysis ("IRFA") of the possible significant economic impact of the policies and rules proposed in the *Further Notice of Proposed Rulemaking* ("*Further Notice*") on a substantial number of small entities.<sup>2</sup> Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the *Further Notice* provided in paragraph 297 of the item. The Commission will send a copy of the *Further Notice*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration ("SBA").<sup>3</sup> In addition, the *Further Notice* and IRFA (or summaries thereof) will be published in the Federal Register.<sup>4</sup>

2. Although Section 213 of the Consolidated Appropriations Act of 2000 provides that the RFA shall not apply to the rules and competitive bidding procedures for frequencies in the 746-806 MHz Band,<sup>5</sup> the Commission believes that it would serve the public interest to analyze the possible significant economic impact of the proposed policy and rule changes in this band on small entities. Accordingly, this IRFA contains an analysis of this impact in connection with all spectrum that falls within the scope of this *Further Notice*, including spectrum in the 746-806 MHz Band.

**A. Need for, and Objectives of, the Proposed Rules**

3. The *Further Notice* encompasses issues pertinent to all three of our 700 MHz proceedings, as well as to Frontline's proposal. First, based on the record developed in connection with the 700 MHz *Commercial Services Notice*, the *Further Notice* proposes several band plans that include a mix of small, medium and large geographic area licenses.

4. Second, the *Further Notice* also proposes to replace the current substantial service requirement with a geographic-based performance requirement, and seeks comment on this suggestion.

5. Third, the *Further Notice* tentatively concludes that the Commission can adopt neither the Broadband Optimization Plan (BOP), nor the proposals to reallocate and reassign commercial spectrum to critical infrastructure industries (CII) or public safety entities, because we do not have the statutory authority to adopt key components of the proposals. Irrespective of the lack of statutory authority, the *Further Notice* also tentatively concludes that the BOP and CII proposals would not be in the public interest, because of the manner in which they propose to assign commercial licenses outside of a competitive bidding context, and because they could introduce an increased possibility of interference.

<sup>1</sup> The RFA, see 5 U.S.C. §§ 601 - 612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 ("SBREFA"), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

<sup>2</sup> See 5 U.S.C. § 603. Although we are conducting an IRFA at this stage in the process, it is foreseeable that ultimately we will certify this action pursuant to the RFA, because we anticipate at this time that any rules adopted pursuant to this *Notice* will have no significant economic impact on a substantial number of small entities. See 5 U.S.C. § 605(b).

<sup>3</sup> See 5 U.S.C. § 603(a).

<sup>4</sup> See 5 U.S.C. § 603(a).

<sup>5</sup> In particular, this exemption extends to the requirements imposed by Chapter 6 of Title 5, United States Code, Section 5 of the Small Business Act (15 U.S.C. 632) and Sections 3507 and 3512 of Title 44, United States Code. Consolidated Appropriations Act 2000, Pub. L. No. 106-113, 113 Stat. 2502, Appendix E, Sec. 213(a)(4)(A)-(B); see 145 Cong. Rec. H12493-94 (Nov. 17, 1999); 47 U.S.C.A. 337-note at Sec. 213(a)(4)(A)-(B).

6. Fourth, the *Further Notice* asks certain questions specifically related to the current Upper 700 MHz Guard Bands, in the event that the Commission maintains the current sizes and locations of either block of the Guard Bands licenses. The *Further Notice* also seeks comment on the alternative Guard Bands proposal recently submitted by Access Spectrum and Pegasus, as well as variations on that proposal.

7. Fifth, the *Further Notice* seeks to achieve broadband communications capabilities consistent with a nationwide interoperability standard for public safety. The Commission expects that modern public safety services will increasingly depend on the advanced communications capabilities afforded by wireless broadband technologies, which should enable first responders to perform their vital safety-of-life and other critical roles. The *Further Notice* tentatively concludes to redesignate the wideband spectrum to broadband use that would be consistent with a nationwide interoperability standard, and to prohibit wideband operations on a going forward basis. The *Further Notice* then seeks comment on a tentative conclusion to consolidate the narrowband spectrum to the top of the Public Safety Band, locate the broadband spectrum at the bottom of the Public Safety Band, and divide these segments with an internal guard band. Given this tentative conclusion, the *Further Notice* also seeks comment on a limited set of issues that would need to be resolved in order to effectuate the reconfiguration. This proposed reconfiguration would reduce the amount of spectrum necessary to separate and protect the public safety broadband and narrowband allocations, and could facilitate partnerships between public safety broadband operations and adjacent commercial broadband technologies, thereby optimizing the 700 MHz public safety band plan.

8. Finally, the *Further Notice* seeks comment on the "Public Safety Broadband Deployment Plan" proposal submitted very recently by Frontline Wireless, which if adopted in some form potentially would affect decisions in all three proceedings.

#### B. Legal Basis

9. The legal authority for the actions proposed in this rulemaking are contained in sections 1, 2, 4(i), 5(c), 7, 10, 201, 202, 208, 214, 301, 302, 303, 307, 308, 309, 310, 311, 314, 316, 319, 324, 332, 333, 336, 337, 614, 615, and 710 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 154(i), 155(c), 157, 160, 201, 202, 208, 214, 301, 302, 303, 307, 308, 309, 310, 311, 314, 316, 319, 324, 332, 333, 336, and 337.

#### C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

10. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.<sup>6</sup> The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."<sup>7</sup> In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.<sup>8</sup> A "small business concern" is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration

<sup>6</sup> 5 U.S.C. § 603(b)(3).

<sup>7</sup> 5 U.S.C. § 601(6).

<sup>8</sup> 5 U.S.C. § 601(3) (incorporating by reference the definition of "small-business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

("SBA").<sup>9</sup>

11. Small Businesses. Nationwide, there are a total of approximately 22.4 million small businesses, according to SBA data.<sup>10</sup>

12. Small Organizations. Nationwide, there are approximately 1.6 million small organizations.<sup>11</sup>

13. Governmental Entities. The term "small governmental jurisdiction" is defined as "governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand."<sup>12</sup> As of 2002, there were approximately 87,525 governmental jurisdictions in the United States.<sup>13</sup> This number includes 38,967 county governments, municipalities, and townships, of which 37,373 (approximately 95.9%) have populations of fewer than 50,000, and of which 1,594 have populations of 50,000 or more. Thus, we estimate the number of small governmental jurisdictions overall to be 85,931 or fewer.

14. Wireless Service Providers. The SBA has developed a small business size standard for wireless firms within the two broad economic census categories of "Paging"<sup>14</sup> and "Cellular and Other Wireless Telecommunications."<sup>15</sup> Under both categories, the SBA deems a wireless business to be small if it has 1,500 or fewer employees. For the census category of Paging, Census Bureau data for 2002 show that there were 807 firms in this category that operated for the entire year.<sup>16</sup> Of this total, 804 firms had employment of 999 or fewer employees, and three firms had employment of 1,000 employees or more.<sup>17</sup> Thus, under this category and associated small business size standard, the majority of firms can be considered small. For the census category of Cellular and Other Wireless Telecommunications, Census Bureau data for 2002 show that there were 1,397 firms in this category that operated for the entire year.<sup>18</sup> Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.<sup>19</sup> Thus, under this second category and size standard, the majority of firms can, again, be considered small.

15. Under this *Further Notice*, any of the changes to the Commission's rules which may occur as a result of the *Further Notice* would be limited to the 698-806 MHz spectrum band. Since this rulemaking proceeding applies to services in that band, this IRFA analyzes the number of small entities

<sup>9</sup> 15 U.S.C. § 632.

<sup>10</sup> See SBA, Programs and Services, SBA Pamphlet No. CO-0028, at page 40 (July 2002).

<sup>11</sup> Independent Sector, The New Nonprofit Almanac & Desk Reference (2002).

<sup>12</sup> 5 U.S.C. § 601(5).

<sup>13</sup> U.S. Census Bureau, Statistical Abstract of the United States: 2006, Section 8, pages 272-273, Tables 415 and 417.

<sup>14</sup> 13 C.F.R. § 121.201, NAICS code 517211.

<sup>15</sup> 13 C.F.R. § 121.201, NAICS code 517212.

<sup>16</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 5, NAICS code 517211 (issued Nov. 2005).

<sup>17</sup> *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "1000 employees or more."

<sup>18</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 5, NAICS code 517212 (issued Nov. 2005).

<sup>19</sup> *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "1000 employees or more."

affected on a service-by-service basis. When identifying small entities that could be affected by the Commission's new rules, this IRFA provides information describing auctions results, including the number of small entities that were winning bidders. However, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily reflect the total number of small entities currently in a particular service. The Commission does not generally require that licensees later provide business size information, except in the context of an assignment or transfer of control application where unjust enrichment issues are implicated. Consequently, to assist the Commission in analyzing the total number of potentially affected small entities, the Commission requests commenters to estimate the number of small entities that may be affected by any rule changes that might result from this *Further Notice*.

16. 700 MHz Guard Band Licenses. In the *700 MHz Guard Band Order*, the Commission adopted size standards for "small businesses" and "very small businesses" for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.<sup>20</sup> A small business in this service is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years.<sup>21</sup> Additionally, a "very small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years.<sup>22</sup> SBA approval of these definitions is not required.<sup>23</sup> An auction of 52 Major Economic Area (MEA) licenses commenced on September 6, 2000, and closed on September 21, 2000.<sup>24</sup> Of the 104 licenses auctioned, 96 licenses were sold to nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of 700 MHz Guard Band licenses commenced on February 13, 2001, and closed on February 21, 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.<sup>25</sup>

17. Upper 700 MHz Band Licenses. The Commission released a *Report and Order* authorizing service in the Upper 700 MHz band.<sup>26</sup> An auction for these licenses, previously scheduled for January 13, 2003, was postponed.<sup>27</sup>

18. Lower 700 MHz Band Licenses. The Commission adopted criteria for defining three groups of small businesses for purposes of determining their eligibility for special provisions such as bidding credits.<sup>28</sup> The Commission has defined a small business as an entity that, together with its

<sup>20</sup> See Service Rules for the 746-764 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *Second Report and Order*, 15 FCC Rcd 5299 (2000).

<sup>21</sup> *Id.* at 5343 ¶ 108.

<sup>22</sup> *Id.*

<sup>23</sup> *Id.* At 5343 ¶ 108 n.246 (for the 746-764 MHz and 776-794 MHz bands, the Commission is exempt from 15 U.S.C. § 632, which requires Federal agencies to obtain Small Business Administration approval before adopting small business size standards).

<sup>24</sup> See "700 MHz Guard Bands Auction Closes: Winning Bidders Announced," *Public Notice*, 15 FCC Rcd 18026 (2000).

<sup>25</sup> See "700 MHz Guard Bands Auctions Closes: Winning Bidders Announced," *Public Notice*, 16 FCC Rcd 4590 (WTB 2001).

<sup>26</sup> Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *Second Memorandum Opinion and Order*, 16 FCC Rcd 1239 (2001).

<sup>27</sup> See "Auction of Licenses for 747-762 and 777-792 MHz Bands (Auction No. 31) Is Rescheduled," *Public Notice*, 16 FCC Rcd 13079 (WTB 2003).

<sup>28</sup> See Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), *Report and Order*, 17 FCC Rcd 1022 (2002).

affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years.<sup>29</sup> A very small business is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years.<sup>30</sup> Additionally, the Lower 700 MHz Band has a third category of small business status that may be claimed for Metropolitan/Rural Service Area (MSA/RSA) licenses. The third category is entrepreneur, which is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$3 million for the preceding three years.<sup>31</sup> The SBA has approved these small size standards.<sup>32</sup> An auction of 740 licenses (one license in each of the 734 MSAs/RSAs and one license in each of the six Economic Area Groupings (EAGs)) commenced on August 27, 2002, and closed on September 18, 2002. Of the 740 licenses available for auction, 484 licenses were sold to 102 winning bidders. Seventy-two of the winning bidders claimed small business, very small business or entrepreneur status and won a total of 329 licenses.<sup>33</sup> A second auction commenced on May 28, 2003, and closed on June 13, 2003, and included 256 licenses: 5 EAG licenses and 476 CMA licenses.<sup>34</sup> Seventeen winning bidders claimed small or very small business status and won sixty licenses, and nine winning bidders claimed entrepreneur status and won 154 licenses.<sup>35</sup>

19. Public Safety Radio Licensees. As a general matter, public safety radio licensees include police, fire, local government, forestry conservation, highway maintenance, and emergency medical services.<sup>36</sup> The SBA rules contain a small business size standard for cellular and other wireless telecommunications companies, which encompasses business entities engaged in wireless communications employing no more than 1,500 persons.<sup>37</sup> According to Census Bureau data for 2002, in this category there were 8,863 firms that operated for the entire year.<sup>38</sup> Of this total, 401 firms had 100 or

<sup>29</sup> *Id.* at 1087-88 ¶ 172.

<sup>30</sup> *Id.*

<sup>31</sup> *Id.* at 1088 ¶ 173.

<sup>32</sup> See Letter to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated August 10, 1999.

<sup>33</sup> See "Lower 700 MHz Band Auction Closes," *Public Notice*, 17 FCC Rcd 17272 (WTB 2002).

<sup>34</sup> See "Lower 700 MHz Band Auction Closes," *Public Notice*, 18 FCC Rcd 11873 (WTB 2003).

<sup>35</sup> *Id.*

<sup>36</sup> See subparts A and B of Part 90 of the Commission's Rules, 47 C.F.R. §§ 90.1-90.22. Police licensees include 26,608 licensees that serve state, county, and municipal enforcement through telephony (voice), telegraphy (code), and teletype and facsimile (printed material). Fire licensees include 22,677 licensees comprised of private volunteer or professional fire companies, as well as units under governmental control. Public Safety Radio Pool licensees also include 40,512 licensees that are state, county, or municipal entities that use radio for official purposes. There are also 7,325 forestry service licensees comprised of licensees from state departments of conservation and private forest organizations that set up communications networks among fire lookout towers and ground crews. The 9,480 state and local governments are highway maintenance licensees that provide emergency and routine communications to aid other public safety services to keep main roads safe for vehicular traffic. Emergency medical licensees (1,460) use these channels for emergency medical service communications related to the delivery of emergency medical treatment. Another 19,478 licensees include medical services, rescue organizations, veterinarians, persons with disabilities, disaster relief organizations, school buses, beach patrols, establishments in isolated areas, communications standby facilities, and emergency repair of public communications facilities.

<sup>37</sup> See 13 C.F.R. § 121.201 (NAICS code 517212); U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Employment Size of Establishments for the United States: 2002," Table 2, NAICS code 517212.

<sup>38</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Employment Size of Establishments for the United States: 2002," Table 2, NAICS code 517212.



more employees, and the remainder had fewer than 100 employees.<sup>39</sup> With respect to local governments, in particular, since many governmental entities as well as private businesses comprise the licensees for these services, we include under public safety services the number of government entities affected.

20. Wireless Communications Equipment Manufacturers; Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing. The Census Bureau defines this category as follows: "This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment."<sup>40</sup> The SBA has developed a small business size standard for Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing, which is: all such firms having 750 or fewer employees.<sup>41</sup> According to Census Bureau data for 2002, there were a total of 1,041 establishments in this category that operated for the entire year.<sup>42</sup> Of this total, 1,010 had employment of under 500, and an additional 13 had employment of 500 to 999.<sup>43</sup> Thus, under this size standard, the majority of firms can be considered small.

**D. Description of Projected Reporting, Recordkeeping and Other Compliance Requirements**

21. Performance Requirements. The *Further Notice* proposes to replace the current substantial service requirement with a geographic-based performance requirement, and seeks comment on this suggestion.

22. Incumbent Eligibility. The *Further Notice* seeks comment on a proposal to encourage the entry of new competitors by excluding incumbent local exchange carriers (ILECs), incumbent cable operators, and large wireless carriers from eligibility for licenses in the 700 MHz Band. The *Further Notice* also seeks comment on whether incumbents should only be eligible for licenses in the 700 MHz band through structurally separate affiliates, which would make it possible to detect whether the incumbent receives more favorable treatment than unaffiliated providers. The *Further Notice* seeks comment on whether the Commission should encourage the entry of new broadband competitors through lesser restrictions on eligibility for obtaining new licenses, both at auction and in the secondary market. Finally, as an alternative to limiting the parties eligible for new licenses in the 700 MHz Band, the *Further Notice* seeks comment on whether parties unaffiliated with incumbent wireline broadband service providers should receive a bidding credit on licenses in the Upper 700 MHz C Block, and how such new entrant bidding credits should be coordinated with existing bidding credits for small businesses (*i.e.*, whether new entrant credits should be cumulative or exclusive of small business bidding credits).

<sup>39</sup> *Id.*

<sup>40</sup> U.S. Census Bureau, 2002 NAICS Definitions, "334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing"; <http://www.census.gov/epcd/naics02/def/NDEF334.HTM#N3342>.

<sup>41</sup> 13 C.F.R. § 121.201; NAICS code 334220.

<sup>42</sup> U.S. Census Bureau, American FactFinder, 2002 Economic Census, Industry Series, Industry Statistics by Employment Size, NAICS code 334220 (released May 26, 2005); <http://factfinder.census.gov>. The number of "establishments" is a less helpful indicator of small business prevalence in this context than would be the number of "firms" or "companies," because the latter take into account the concept of common ownership or control. Any single physical location for an entity is an establishment, even though that location may be owned by a different establishment. Thus, the numbers given may reflect inflated numbers of businesses in this category, including the numbers of small businesses. In this category, the Census breaks-out data for firms or companies only to give the total number of such entities for 2002, which was 929.

<sup>43</sup> *Id.* An additional 18 establishments had employment of 1,000 or more.